

Sustainable Disclosure Toward Firm Value: Recent Development and Future Research Agenda

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Abstract: This study aims to investigate empirical research to see the relationship between sustainability disclosure and firm value. This literature review is important for enhancing our understanding of the relationship between sustainability disclosure and firm value. Reviewing prior studies provides valuable insights and conclusions, and identifies trends, patterns, and gaps in the existing research. Articles were identified via publish or perish software and the Web of Science database. Through scanning with PRISMA, we analyzed 43 articles from 24 leading journals from 2007 to 2021. To the best of the researchers' knowledge, a literature review on the relationship between sustainability disclosure and firm value is unprecedented. This study advances our knowledge of sustainability disclosure as a factor in firm value. In more detail, this study looks at the ideas that have been put out to explain the connection between the two variables and concludes that previous empirical investigations have not produced consistent findings regarding the relationship between sustainability disclosure and firm value. The relationship between sustainability disclosure and firm value has been explored from various theoretical perspectives: legitimacy theory, stakeholder theory, agency theory, signaling theory, and information asymmetry theory.

Keywords: agency theory, firm value, sustainable disclosure, systematic literature reviews.

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INTRODUCTION

Firm value is an essential indicator for stakeholders since it offers information on the financial health, future prospects, and reputation of a business. It affects choices about investments, shareholder wealth, creditor assessments, and the capacity for forming reliable business relationships. A major goal for businesses is to preserve and enhance the value of the firm, which is closely related to ethical business practices and successful management strategies. A company's ultimate objective should be to enhance its firm value, which is often reflected in its stock price. The stock price of publicly traded companies serves as an indicator of investors' perception and evaluation of the company's worth. Fluctuations in stock prices reflect the market's sentiment



towards the company and its prospects. Therefore, by striving to improve firm value, companies aim to generate positive investor sentiment, attract capital investment, and ultimately maximize shareholder wealth (Huang, 2022; Purbawangsa et al., 2020) .

The concept of value relevance has been studied extensively in research (Rahman et al., 2020). According to (Lepak et al., 2007; Sharma & Verma, 2021), value creation is an important idea that can be influenced by many viewpoints and interests held by people, organizations, and society as a whole. The notion of value is not universally defined and can differ based on the context and stakeholders involved. What one party considers valuable may not align with the priorities or perspectives of others. Maximizing firm value does not imply disregarding the interests of other stakeholders. According to Jensen (2002), companies should consider the interests of other stakeholders such as employees, customers, and suppliers because the well-being of these stakeholders is closely linked to the success of the company. Recognizing and addressing the needs and concerns of stakeholders beyond shareholders is crucial for sustaining long-term success and building strong relationships. Brigham & Houston (2021) states that companies are obligated to adhere to various regulations and ethical standards, including those related to environmental protection and fair labor practices. These regulations aim to ensure that businesses operate responsibly, minimize their negative impact on the environment, and treat their employees fairly. By complying with these regulations, companies contribute to sustainable development and create a positive societal impact.

Rindova et al. (2005) highlight the importance of evaluating the concept of firm value from a social perspective. Traditionally, firm value has been primarily assessed based on financial indicators such as profitability, stock prices, and market capitalization. However, the social perspective argues that these financial measures provide an incomplete picture of a company's true value and impact on society. Purbawangsa et al., (2020) argue that a financial report alone does not determine a firm's market value, as there are additional factors that contribute to a firm's overall value and cannot be captured solely in financial reports. (Elaffify, 2021) stated the same thing that evaluating corporate performance solely based on financial measures is insufficient. Stakeholders are increasingly concerned about a company's social responsibility practices. They may avoid investing in companies engaged in unethical practices such as sweatshops, child labor, or operating in regions with poor human rights records or questionable political systems. Therefore, considering non-financial factors is crucial in assessing a company's overall performance and reputation.

Al-Najjar & Anfimiadou (2012) highlight the significance of disclosing non-financial performance, such as sustainability reporting, in enabling investors to make informed decisions regarding listed companies in the long run. Arnold et al., (2012) support the notion that investors consider both financial and non-financial information in their decision-making process. They argue that investors who take a long-term perspective recognize the materiality of non-financial factors and their impact on a company's long-term value. By incorporating non-financial performance indicators into their investment analysis, investors can gain a more comprehensive understanding of a company's performance, risks, and opportunities. This broader perspective helps investors make more informed decisions aligned with their values and long-term goals.

Traditionally, financial reporting has been the primary means of assessing a company's performance and value. However, with the growing awareness of environmental, social, and governance (ESG) issues, stakeholders are seeking more comprehensive information beyond financial metrics. Sustainability reporting is increasingly recognized as a value-creating activity, driven by advancements in non-financial reporting, as highlighted by de Villiers et al. (2014). Sustainability reporting provides a platform for companies to disclose their ESG practices, initiatives, and performance. By reporting on environmental impacts, social responsibilities, and governance practices, companies demonstrate their commitment to sustainable development and responsible business

practices. Sustainability reporting is recognized as a value-creating activity due to advancements in non-financial reporting. It enhances transparency, helps manage risks and opportunities, improves reputation, and facilitates better decision-making. By integrating sustainability into their reporting practices, companies can generate value for themselves and their stakeholders in the pursuit of long-term sustainable development.

Guliman-Qudsi & Uy (2019) state that in recent literature, the topic of sustainability has gained popularity and is increasingly being considered in management decisions as a result of changing public awareness (Windolph et al., 2014). Elkington established the Triple Bottom Line (TBL) idea in 1994 as an accounting paradigm that includes environmental and social factors in traditional financial business performance models. The Triple Bottom Line is defined by Elkington (1998) as economic prosperity, environmental quality, and social justice. According to Elkington (1998) sustainability has three pillars: social, economic, and environmental.

Organizations are increasingly reporting their sustainability actions using the Triple Bottom Line approach. The meeting of three components: people to describe social aspects, planet to explain environmental aspects, and profit to explain economic aspects, is what defines sustainability. Companies, according to Elkington (1998) must be held accountable for both positive and bad effects on economic, social, and environmental factors. Environmental practices such as lowering emissions and consuming resources are company actions that affect firm stakeholders participating in environmental conservation initiatives, such as saving resources and reducing pollution, according to (Yoon et al., 2018).

Public engagement and regulatory encouragement further push companies to adopt sustainable strategies (Amalia & Triwacananingrum, 2022). Companies with a social conscience are increasingly adopting sustainability strategies, and the relationship between sustainability disclosure and firm value has been studied by specialists in recent years (Loh et al., 2017). One of the strategies used by investors to make investment decisions is environmental sustainability reporting (Khan et al., 2016). Companies have begun to recognize the necessity of correctly evaluating a sustainability approach to meet their future goals, according to Alsayegh et al. (2020). Companies that actively address environmental, social, and governance sustainability benefit their communities and enterprises by providing more value (Taliento et al., 2019). According to Li et al. (2018), companies with greater environmental sustainability disclosures are more likely to be targeted by investors and have better stakeholder interactions. Ammer et al. (2020) discovered that, in addition to enhancing stakeholder trust, reporting on environmental sustainability policies as a form of corporate responsibility and transparency is significant in increasing firm value.

A literature review on the topic of sustainability, as well as those connected to its dimensions, has been undertaken in several prior studies. Dienes et al. (2016) conducted a comprehensive evaluation of studies in the field of sustainability reporting with the goal of answering research questions such as what factors influence sustainability reporting. A systematic review reveals that the most important determinants of sustainability reporting disclosure are firm size, media presence, and ownership structure, whereas corporate governance appears to have only a small impact on the existence of an audit committee or sustainability. However, other variables of corporate governance, such as profitability, capital structure, firm age, and board composition, do not demonstrate a consistent pattern. Margolis et al. (2009) gathered 251 empirical papers (214 manuscripts) that demonstrate the link between ESG and financial performance has diminished over time. Wang et al. (2016) concluded that social performance increases company performance based on a meta-analysis of 42 papers published in top journals.

A systematic analysis of various sorts of study results connected to sustainability disclosure and corporate assessment runs the danger of interpreting the data incorrectly. To avoid this issue, this study will solely look at sustainability disclosure, which refers to the disclosure of non-financial information about governance,

economics, society, and the environment. While the firm's evaluation refers to the evaluation of financial and market performance. Through a comprehensive assessment of the literature, this study aims to synthesize research conditions regarding the relationship between sustainability disclosure and firm value, to obtain insights about the potential and direction of further research.

To our knowledge, this is the first systematic evaluation of the research on the implications of sustainability disclosure on firm value. Based on prior studies, this literature review on the relationship between sustainability disclosure and firm value plays a crucial role in deepening the understanding of the relationship between sustainability disclosure and firm value. By examining previous research, insights and conclusions reached by researchers can be obtained. This helps in understanding trends, patterns, and relationships between sustainability disclosure and firm value. This literature review helps in identifying gaps in existing research. It allows for an examination of whether certain aspects have been adequately addressed in previous studies or if there are contradictions in reported findings. This provides an opportunity to determine if there is room for further research to fill these gaps or provide a deeper understanding of the relationship between sustainability disclosure and firm value.

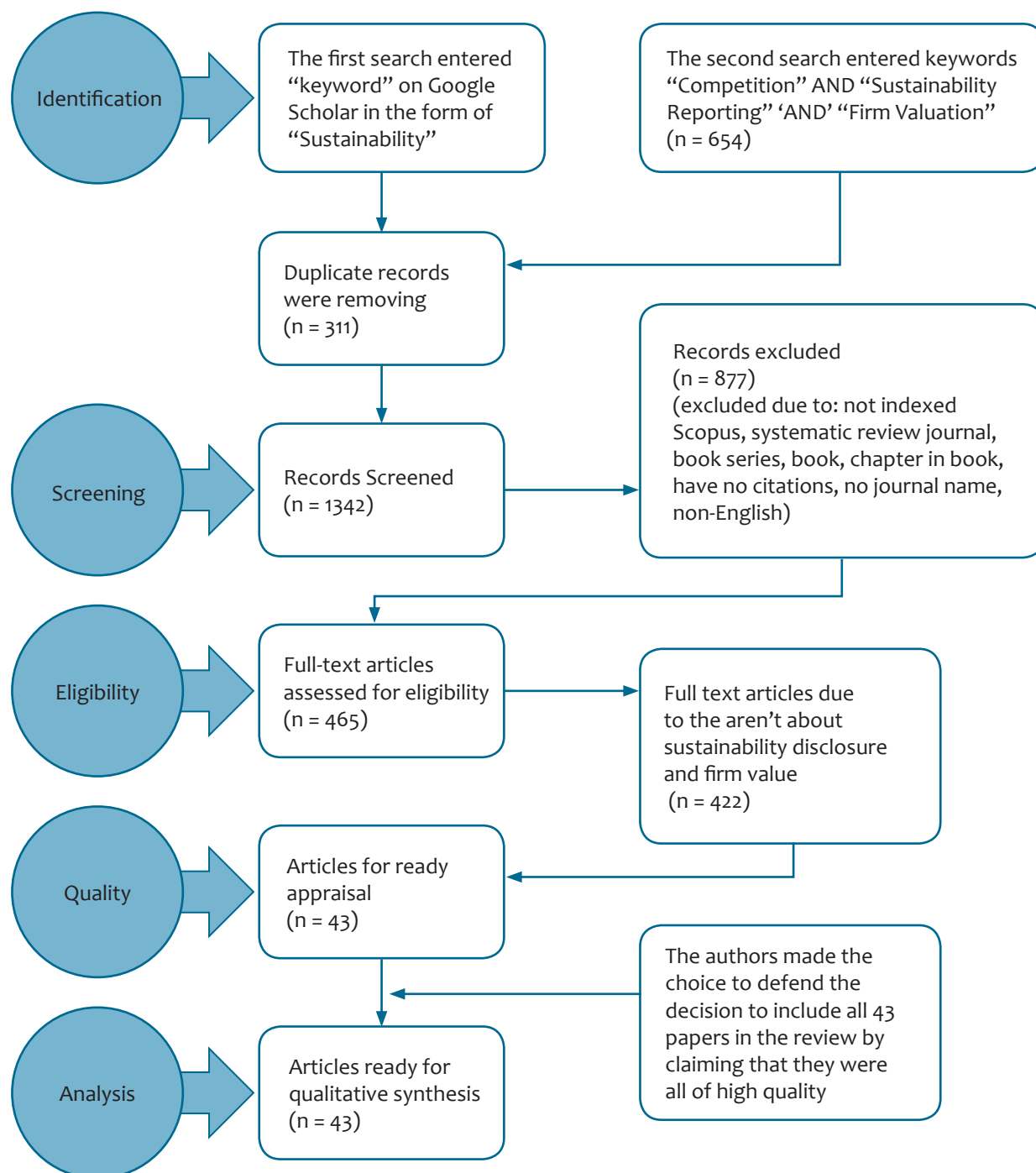
METHODS

Sustainability is defined as the ability to meet current needs without jeopardizing future generations' ability to meet their own (Wachowicz & Van Horne, 2001). Mitchell et al. (2008) define sustainability as "the entire set of values, challenges, and processes that a corporation must have in order to reduce losses resulting from activities." In the literature, sustainability treatment frequently overlaps with Corporate Social Responsibility (CSR). Although the two concepts have conceptual distinctions, sustainability is a larger idea. CSR is frequently linked to sustainability because it is a method for achieving sustainability and is frequently considered a component of sustainability (Loh et al., 2017). Sustainability, in its current form, is a broader term that should not be equated with corporate social responsibility alone.

This study used the systematic literature review methodology to adequately answer this research issue. To cover the subject area as comprehensively as possible, a systematic review of the research is conducted using keywords collected from prior research (Hahn & Kühnen, 2013). The following are the five primary approaches mentioned by Denyer & Tranfield (2009) that can be used in systematic research of this topic: (1) Creating a list of research questions; (2) Gathering materials through the creation of a database and establishment of search criteria; (3) Identifying essential subjects and interpreting results by selecting and analyzing relevant articles based on structural categories; (4) Offering valid results and highlight formal elements of the material chosen and analyzed, in which descriptive analysis and synthesis are used; and (5) conducting a systematic review which closes with a discussion of the findings as well as a summary of what is known and unknown about the research questions. A meta-analysis of scholarly papers was performed using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) technique (Figure 1) (Noory et al., 2021). This strategy was utilized to choose the scientific literature articles in order to comprehend the extent and measurement of competition's impact on financial stability due to its conflicting implications. This study will also explore the study's limits as well as future research directions.

According to Hahn & Kühnen (2013) in order to cover the subject of study as comprehensively as possible, a systematic review of current research is undertaken using keywords picked from prior research. A thorough search of the Web of Science and Google Scholar databases was done to conduct a systematic review of this research. Previous studies on sustainability disclosure employed a variety of phrases, thus this study enhanced

the detailed search linked to sustainability disclosure by utilizing the following keywords: “Sustainability Disclosure*”, “Sustainability Reporting*” and for firm valuation, the keywords used are “Firm Value*”, “Firm Valuation*”.



Source: Adapted (Noory et al., 2021)

Figure 1 PRISMA Flow Chart of the Systematic Literature Review and Article Identification Process

To summarize the purpose of this study, Publish or Perish software was used as a search engine to find important material. Publish or Perish is used to determine which author receives the most citations, the year of the oldest and most recent articles, and the bibliometric record of each study that will be used (Husaeni & Nandiyanto, 2022). In this study, the literature search was carried out twice. The first search entered “keywords” on Google Scholar in the form of “sustainability reporting” ‘AND’ “firm valuation”, a total of 999 articles were retrieved containing related terms. While the second search by entering the keywords “sustainability disclosure” ‘AND’ “Firm Value” to narrow the scope of the search and obtained 654 articles. The article selection process used in this study used PRISMA Flow Chart of the Systematic Literature Review and Article Identification. The process presented in Figure 1. In order to reinforce recommendations for future research agendas, this study conducted a bibliometric analysis using the Vos Viewer software.

RESULTS AND DISCUSSIONS

This study examines 43 empirical studies relating to sustainability disclosure and firm valuation after going through the screening process. Figure 2 depicts the study’s dispersion by year. This systematic study does not have a time frame in mind, but it does want to assess how research on connected areas has progressed over time. The study mentioned in this literature review took place between 2007 and 2021, with the most empirical studies on relevant issues being identified in 2018 and 2020. Only until May 2021 did journal searches result in a decline of publications in 2021 compared to 2020.

The distribution of research by the journal is depicted in Figure 3. The 43 articles assessed in this study were published in 24 respectable journals, as shown in Figure 3. There are nine journals out of the 24 that publish several articles, namely The British Accounting Review, Management of Environmental Quality, Sustainability Accounting, Management, and Policy Journal, Sustainability, Journal of Accounting and Public Policy, Emerging Markets Review, Corporate Social Responsibility Environmental Management, Business Strategy, and The Environment, Australian Accounting Review.

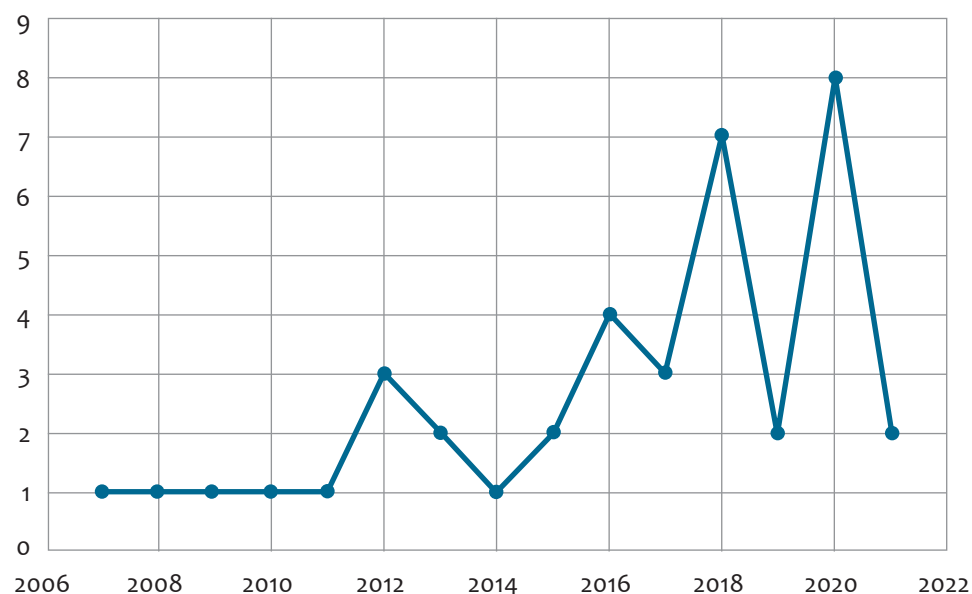


Figure 2 Distribution of Research by Year

Figure 4 shows the continent-by-continent distribution of the countries studied in this study: 35 percent of the studies were conducted in Asian countries, 28% in European countries, 18% in North America (the United States and Canada), 5% in Australia, 5% in Africa, and 9% using an international evidence method. Thirty-two studies looked at businesses in each industry, whereas three looked at non-financial businesses (Lo & Sheu, 2007; Qiu et al., 2016; Sampong et al., 2018). In addition, three studies looked at the banking sector (Buallay et al., 2020; Carnevale & Mazzuca, 2014; Buallay, 2019), and one looked into airline firms all over the world (Abdi et al., 2020).

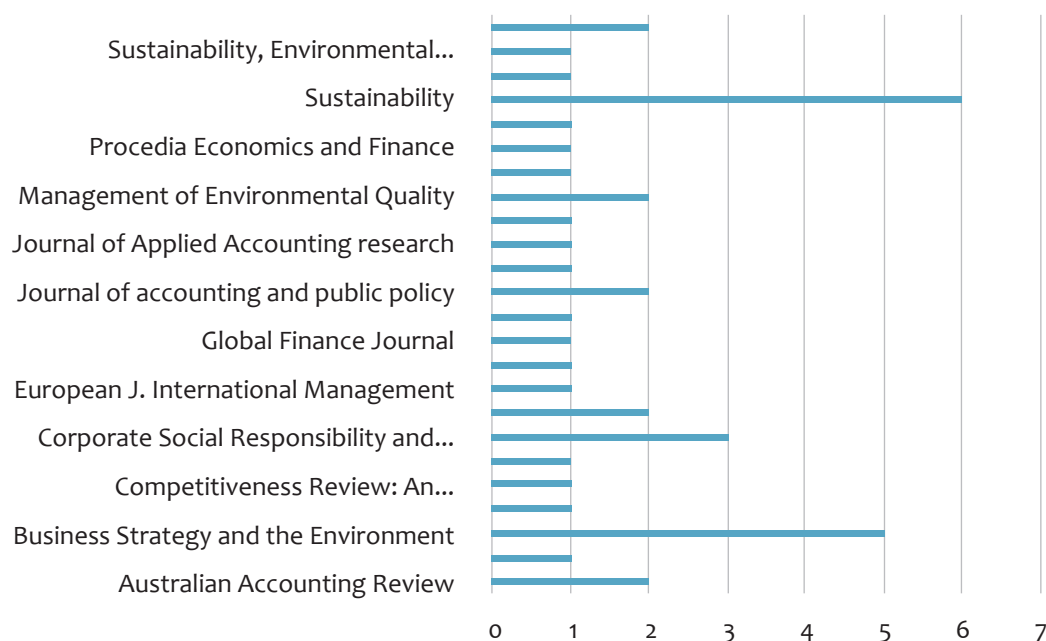


Figure 3 Distribution of Research-Based on Journals

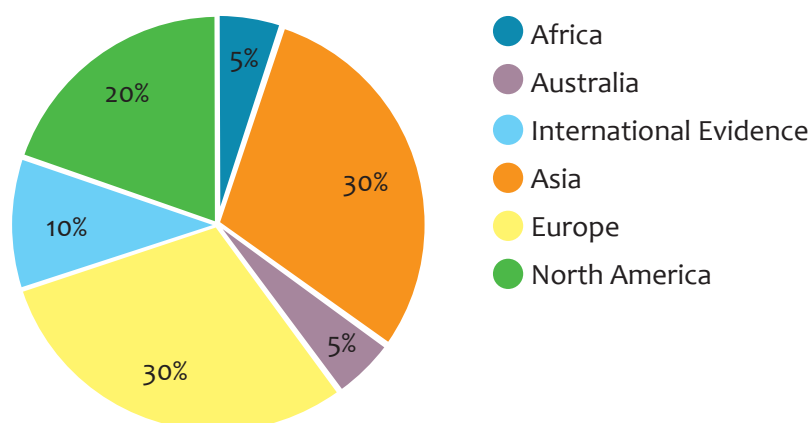


Figure 4 Distribution of Research by Country

The theories that support research that examines sustainability disclosure and firm value will be examined first in this study. There are five major theories connected to the discussion of sustainability disclosure and corporate valuation, based on a survey of 43 studies that are the focus of this research. In Table 1, the five theories are listed as follows.

Table 1 Supporting Theory

Theory	Author
Stakeholder theory	(Li et al., 2018); (Atan et al., 2018); (Sampong et al., 2018); (Laskar & Gopal Maji, 2018); (Li et al., 2020); (Qureshi et al., 2020); (Abdi et al., 2020); (Buallay et al., 2020); (Sul & Lee, 2020); (Ammer et al., 2020); (Zhang et al., 2020); (Mohammad & Wasiuzzaman, 2021)
Legitimacy theory	(Brown et al., 2009); (Schadewitz & Niskala, 2010); (Qiu et al., 2016); (Kuzey & Uyar, 2017); (Loh et al., 2017); (Sampong et al., 2018); (Ali et al., 2020); (Abdi et al., 2020); (Ammer et al., 2020); (Radhouane et al., 2020); (Iatridis, 2013),
Agency Theory	(Kuzey & Uyar, 2017); (Loh et al., 2017); (Uyar et al., 2018); (Li et al., 2018); (Yu et al., 2018); (Chauhan & Kumar, 2018); (Buallay, 2020)
Signaling theory	(Bachoo et al., 2013); (Kuzey & Uyar, 2017); (Loh et al., 2017); (Zhang et al., 2020)
Information asymmetry theory	(Cellier & Chollet, 2016); (Yu et al., 2018); (Chauhan & Kumar, 2018)

Stakeholder theory is the first theory to be discussed. Stakeholder theory extensively discusses the relationship between sustainability disclosure and firm value. The stakeholder theory argues that companies are responsible not only to their shareholders but also to various parties with interests (stakeholders) in the company's activities (Freeman, 1984). Stakeholder theory provides a framework for businesses to understand and manage their relationships with various stakeholders and to make decisions that balance the interests of all parties involved (Lin, 2018). It encourages businesses to adopt a more holistic and inclusive approach to corporate governance and decision-making, promoting long-term value creation and responsible business practices.

According to Atan et al. (2018) from the standpoint of stakeholder theory, organizations must address the expectations of both internal and external stakeholders. Environmental, social, and governance activities are viewed as management attempts to satisfy stakeholder expectations while also improving corporate performance. Stakeholder theory, which considers sustainability (ESG) operations as an improvement in value for both the firm and stakeholders (Qureshi et al., 2020), supports previous research that sees sustainability (ESG) activities as an increase in the company's competitiveness (Mohammad & Wasiuzzaman, 2021). Sustainability disclosure (ESG) is also a relevant value that has a positive link with stock prices (Qureshi et al., 2020).

In the context of sustainability disclosure, the stakeholder theory emphasizes the importance of disclosing sustainability information to various stakeholders, such as employees, customers, local communities, suppliers, and the general public. By adopting effective sustainability disclosure practices, companies can build a strong reputation, enhance stakeholder relationships, reduce reputational and legal risks, attract investors, and create long-term value for the company. In the context of the relationship between sustainability disclosure and firm value, the stakeholder theory emphasizes that effective and integrated sustainability disclosure in the company's business strategy can provide competitive advantages and create long-term value for the company. Thus, the stakeholder theory provides an important conceptual basis for understanding and explaining the relationship between sustainability disclosure and firm value. This theory underscores the importance of considering

and involving various stakeholders in corporate decision-making and the significance of transparency and accountability in sustainability information disclosure.

The second theory that will be discussed in this study is the legitimacy theory. In the organizational and social sciences, legitimacy is a fundamental concept that refers to the perceived validity, acceptance, or appropriateness of an organization or its actions within a specific social context (Dowling & Pfeffer, 1975). According to Legitimacy Theory, companies recognize the importance of operating within the framework and standards established by the society or environment in which they operate. Legitimacy Theory suggests that companies actively engage in activities and behaviors that are socially desirable and acceptable in order to gain and maintain legitimacy in the eyes of their stakeholders (Deegan & Islam, 2012).

Dowling & Pfeffer (1975) state that legitimacy has a significant impact on consumer decision-making and contributes to enhancing a company's positive reputation. Consumers are more likely to trust and engage with companies that are perceived as legitimate in the eyes of society. Legitimacy acts as a form of social approval and recognition, indicating that a company's actions and behaviors align with societal norms, values, and expectations. According to (Chung et al., 2016), consumers are more likely to spend their money on organizations that they perceive as legitimate. Legitimacy plays a significant role in shaping consumer behavior and purchase decisions. Consumers have become increasingly conscious of the social and environmental impact of the organizations they support. They are more inclined to support companies that align with their values, demonstrate responsible practices, and are perceived as legitimate in the eyes of the public.

According to Cho & Patten (2007), sustainability disclosures are often driven by public pressure to gain social legitimacy for businesses that have significant environmental and social impacts. Legitimacy Theory argues that companies disclose sustainability information as a way to demonstrate their commitment to responsible practices and address stakeholder expectations. Kuzey & Uyar (2017) found that weaker environmental performers tend to disclose more comprehensive environmental information compared to higher performers. This can be attributed to their desire to seek legitimacy and demonstrate efforts to improve their environmental performance. By disclosing detailed information, these companies aim to show their commitment to sustainability and gain public acceptance. This supports the findings of Schadewitz & Niskala (2010) that companies indeed respond to public pressure through sustainability disclosure, which aligns with the principles of Legitimacy Theory. Legitimacy Theory posits that organizations strive to gain legitimacy in the eyes of external stakeholders by adhering to societal norms, values, and expectations.

The relationship between firm value and sustainability disclosure can indeed be explained using Legitimacy Theory. The theory suggests that organizations strive to gain and maintain legitimacy in the eyes of their stakeholders, including investors, by conforming to societal norms and expectations. Sustainability disclosure, which involves providing information about a company's environmental, social, and governance (ESG) performance, is one way for companies to demonstrate their commitment to responsible and sustainable practices. By disclosing their ESG efforts and performance, companies aim to enhance their perceived legitimacy and build trust with stakeholders. From an investor perspective, sustainability disclosure can provide valuable information about a company's non-financial performance and its ability to manage ESG risks and opportunities. Investors who consider ESG factors in their decision-making process may view companies with robust sustainability disclosure practices as more trustworthy and responsible. This positive perception can contribute to higher firm value. Therefore, Legitimacy Theory provides a theoretical framework to understand how sustainability disclosure can influence firm value. By aligning their actions with societal expectations and disclosing their sustainability efforts, companies can enhance their legitimacy, improve stakeholder relationships, and ultimately contribute to their long-term value and success.

Agency Theory is a framework used to understand the relationship between principals (owners or investors) and agents (managers) within an organization (Eisenhardt, 1989). The theory emphasizes the potential conflicts of interest that may arise between these two parties (Jensen & Meckling, 1976). In an agency relationship, principals delegate certain decision-making authority to agents to act on their behalf. However, due to differences in goals, information, and risk preferences, conflicts of interest can arise (Aktas et al., 2019; Moscariello et al., 2019; Dewi et al., 2021; Rossi & Harjoto, 2020; Shi et al., 2017). Principals seek to maximize their wealth or interests, while agents may have their own objectives and motivations. Agency Theory highlights the challenges of aligning the interests of principals and agents and addresses the potential for opportunistic behavior by agents. The theory highlights the importance of building systems and mechanisms to address these conflicts and ensure that the actions of managers align with the interests of shareholders and maximize shareholder wealth (Cormier & Magnan, 2007).

The study conducted by Iatridis (2013) supports the notion that companies with higher sustainability disclosure scores tend to have effective corporate governance structures, which in turn enhance their sustainability reporting practices. Effective corporate governance refers to the mechanisms and processes through which a company is directed, controlled, and regulated. It encompasses various aspects, including the roles and responsibilities of the board of directors, executive compensation, transparency, and accountability. The findings of the study suggest that companies with strong corporate governance structures are more likely to prioritize and excel in sustainability reporting. Research by Loh et al. (2017) examines the relationship between sustainability disclosure and the firm value of companies listed in Singapore. This research supports the agency theory and finds that sustainability disclosure is positively related to the market value of the company. From the perspective of agency theory, principals can obtain more transparent information about social, environmental, and corporate actions related to sustainability with sustainability reporting. Sustainability reporting allows principals to monitor and evaluate whether agents have acted in accordance with the company's long-term interests. So that sustainability reporting can strengthen principals' trust in agents and affect firm value.

Information asymmetry can be a potential source of conflict between shareholders and company management (Brown, 2016; Chapman et al., 2019; Cui et al., 2018). Signaling Theory is closely related to how to solve the problem of information asymmetry in a competitive environment (Taj, 2016; Connelly et al., 2011; Mavlanova et al., 2012). To eliminate information asymmetry, companies convey signals to stakeholders in a variety of ways, and one of the most effective strategies is releasing information in reports such as sustainability reports or annual reports (Ching & Gerab, 2017). The company's sustainability disclosures have emerged as a powerful means of communication with various stakeholders. Sustainability disclosures involve the reporting and communication of a company's environmental, social, and governance (ESG) practices, performance, and impacts. These disclosures provide stakeholders with valuable information regarding the company's commitment to sustainable practices, its environmental footprint, social initiatives, ethical standards, and long-term viability.

The results of Bachoo et al. (2013) research support the signaling theory by proving that the market values high-quality sustainability reporting and that the environmental component of sustainability reporting is most closely related to firm value. Signaling Theory shows that effective management employs sustainability reports to notify stakeholders about the company's commitments and long-term plans for management sustainability (Ching & Gerab, 2017). Ching & Gerab (2017) stated that sustainability disclosure serves as a powerful signal to stakeholders and the general public about various aspects of a company's operations and practices. It goes beyond providing information on environmental performance and extends to broader areas of governance, financial stability, social responsibility, and climate change mitigation efforts. By sending these signals through

sustainability disclosure, companies can shape stakeholder perceptions, differentiate themselves in the market, attract investment, and enhance their overall reputation. It showcases their commitment to sustainable practices, responsible governance, and stakeholder engagement, which are increasingly important factors for stakeholders and the general public in evaluating and engaging with companies.

Based on Signaling Theory, Anam et al. (2011) discovered a positive association between disclosure and firm value and proposed that enhanced transparency and disclosure led to a decrease in share price mis-evaluation, which in turn increased firm value. By reducing the legitimacy gap with society, signaling reduces information asymmetry between an organization and its various stakeholders (insiders and outsiders) and gives a competitive advantage to the company (Ching & Gerab, 2017). Signaling through sustainability disclosure is one approach to decrease information asymmetry. Sustainability disclosure can enhance investor trust in a firm since it sends a good signal about the company's commitment to sustainability.

Signaling Theory implies that sustainability disclosure can enhance firm value by attracting socially responsible investors, reducing information asymmetry, and fostering positive stakeholder perceptions (Huang, 2022; Vitolla et al., 2020; Wardhani & Hamidah, 2019). Investors who prioritize ESG factors in their investment decisions may consider sustainability disclosure as an important signal of a firm's commitment to sustainable practices, responsible governance, and risk management. As a result, firms that effectively communicate their sustainability performance through disclosure may enjoy a higher level of investor confidence and, ultimately, experience positive effects on firm value.

The impact of asymmetric information theory on the market is enormous (Aboody & Lev, 2000). Moral hazards, information monopoly, and adverse selection are some of the unintended consequences of information asymmetry (Aboody & Lev, 2000). According to Jensen & Meckling (1976), there is reason to suppose that the agent will not always act in the best interests of the principal if both the agent and the principle are striving to maximize their utility. Investors are unable to receive timely information since they only have access to information that is provided in accordance with regulations (Lakhal, 2008). Because more informed investors use their information in trading, information asymmetry causes uncertainty in the stock market and expenses, as well as adverse selection in transactions (Akerlof, 1970)

According to Diamond (1985), public information makes traders' opinions more homogeneous and minimizes the intensity of traders' speculative behaviors. Companies can reduce market friction and encourage the efficient functioning of capital markets by increasing their disclosures (Healy & Palepu, 2001). One of the company's efforts to suppress information asymmetry is to increase the disclosure of information about sustainability. The study by Frias-Aceituno et al. (2014) revealed that sustainability reporting provides information about corporate strategy, corporate governance, performance, and prospects that reflects the commercial, social, and environmental context in which the company operates. Sustainability disclosure voluntarily disclosed by the company will be able to complement the information that has been disclosed mandatory so that more comprehensive information will be able to reduce information asymmetry. Sustainability disclosure can increase financial market confidence and increase shareholder value (Martínez-Ferrero et al., 2016). Yu et al. (2018) argue that better ESG transparency has the potential to have an impact on firm value because it reduces investor information asymmetry and agency costs.

Reducing information asymmetry through sustainability disclosure is expected to positively affect firm value. When firms disclose relevant and reliable sustainability information, it helps investors make more informed investment decisions. Stakeholders, including investors, can evaluate a firm's sustainability performance, risk exposure, and potential for long-term value creation. Reduced information asymmetry enables stakeholders to assess the firm's ESG practices and align their investment decisions with their sustainability preferences. As a

result, firms that effectively address information asymmetry through sustainability disclosure may experience enhanced investor confidence and improved firm value.

There are other theories applied in research that investigate the relationship between sustainability disclosure and firm value, in addition to the five theories listed above. Institutional Theory, Efficient Market Theory, Resource-Based Value Theory, and Voluntary Disclosure Theory are examples of these theories. The relationship between sustainability disclosure and firm value can be researched from several theoretical viewpoints, according to various hypotheses that can be used to explain the relationship between the two variables. These theories provide different lenses to understand and analyze the relationship between sustainability disclosure and firm value. Researchers may draw on these theories to develop hypotheses and explore the specific mechanisms through which sustainability disclosure influences firm value. By considering multiple theoretical perspectives, researchers can gain a comprehensive understanding of this complex relationship and contribute to broader knowledge in the field of sustainability and firm value.

This systematic review's aim is to find out how the relationship between sustainability disclosure and firm valuation is related. The direction of the relationship between sustainability disclosure and firm valuation was not constant after using the systematic review approach to 43 research results selected as the subject of this investigation. While some studies have found a positive association between sustainability disclosure and firm valuation, indicating that companies with better sustainability performance and disclosure tend to have higher market value, other studies have shown mixed or inconclusive results. The inconsistency in findings can be attributed to several reasons. First, measuring and evaluating sustainability disclosure and firm valuation can be complex, as there are different methodologies and indicators used across studies. Additionally, the specific industry and market conditions can influence the significance and impact of sustainability disclosure on firm valuation. Moreover, the perceptions and preferences of investors and other stakeholders can vary, leading to differences in how they interpret and respond to sustainability disclosure. Some investors may value sustainability performance and consider it in their investment decisions, while others may prioritize other factors. This diversity of perspectives can contribute to the varied findings in literature.

The communication provided by companies registered in Finland through GRI Reporting is a significant explanatory factor for the market value of the company, according to Schadewitz & Niskala (2010). Meanwhile, investors value additional and supplementary information in the form of sustainability reporting, according to Berthelot et al. (2012) and Carnevale & Mazzuca (2014). This research also found a positive relationship between sustainability disclosure and firm value (Kuzey & Uyar, 2017; Loh et al., 2017; Yu et al., 2018; Aboud & Diab, 2018; Buallay, 2019; Buallay, 2020; Buallay et al., 2020), whom Companies with higher quality sustainability disclosures have a higher market value than companies with lower quality sustainability disclosures, according to Loh et al. (2017) who researched companies listed in Singapore.

Several studies related to sustainability disclosure and company valuation examine one or two dimensions of sustainability. One of them is a study conducted by Iatridis (2013) which found that high-quality environmental disclosure is valuable and increases investor perceptions. This finding is supported by Ammer et al. (2020) and Plumlee et al. (2015) who found that environmental disclosure positively increases firm value. Disclosure of two dimensions of sustainability, namely environmental and social information, can have a positive impact on firm value (Zhang et al., 2020; Qureshi et al., 2020); and the effect on the company's stock price (Qiu et al., 2016). While research by Abdi et al. (2020) in airline companies around the world supports a positive relationship between environmental pillar scores and governance pillar scores with the ratio of market to firm value and financial performance. Meanwhile, Sampong et al. (2018) who studied companies listed in South Africa, found a positive and significant relationship between social disclosure performance and firm value.

A positive relationship was not found in a study conducted by Fatemi et al. (2018) conducted a study on 403 companies listed in the US for the reporting period between 2006 and 2011 and found that ESG disclosure reduces firm value. Bing & Li (2019) and Radhouane et al. (2020) also found that corporate ESG disclosures were negatively correlated with firm value (Tobin's Q). Atan et al. (2018) who examined the relationship between ESG and firm performance (profitability, firm value, cost of capital) found that there was no significant relationship between ESG disclosure and firm profitability (ROE) and firm value (Tobin's Q), both measured from each ESG dimension individually or in combination. While research on one dimension of sustainability was conducted by Cardamone et al. (2012) found that social reporting showed a negative correlation with stock prices, while (Abdi et al., 2020) found that the disclosure of social pillars had a significant negative relationship with firm value. Sampong et al. (2018) who studied companies listed in South Africa found a negative and significant relationship between environmental disclosure performance and firm value.

The following analysis is cluster identification through bibliometric analysis using VOS Viewer software version 1.6.16. The use of this software makes it possible to create a network of scientific publications, journals, research, research organizations, nations, keywords, and terms (van Eck & Waltman, 2020). This bibliometric analysis is needed to conduct in-depth studies so that it can describe ideas for further research. The results of the network visualization are shown in Figure 5.

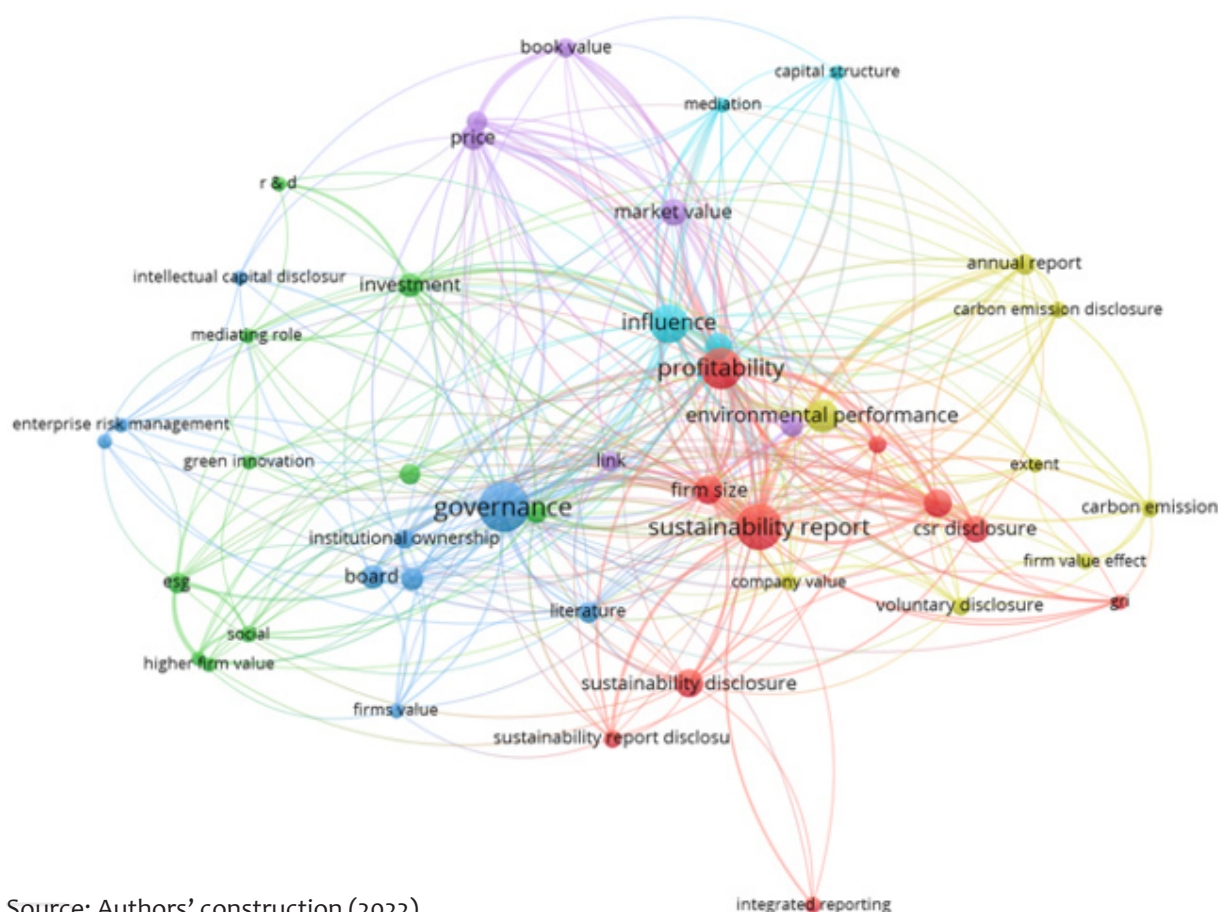


Figure 5 Keyword network cluster

The results of the bibliometric analysis in Figure 5 show several keywords related to sustainability disclosure and firm value. The results of the analysis are visualized in six clusters, which highlight several different words in each cluster. Each is a keyword that has the largest number of links and the highest total link strength (Table 2). This figure shows that these keywords have a more important meaning when compared to other keywords in one cluster. The greater the link value and total link strength, the more important the keywords are.

Table 2 The Important Keyword

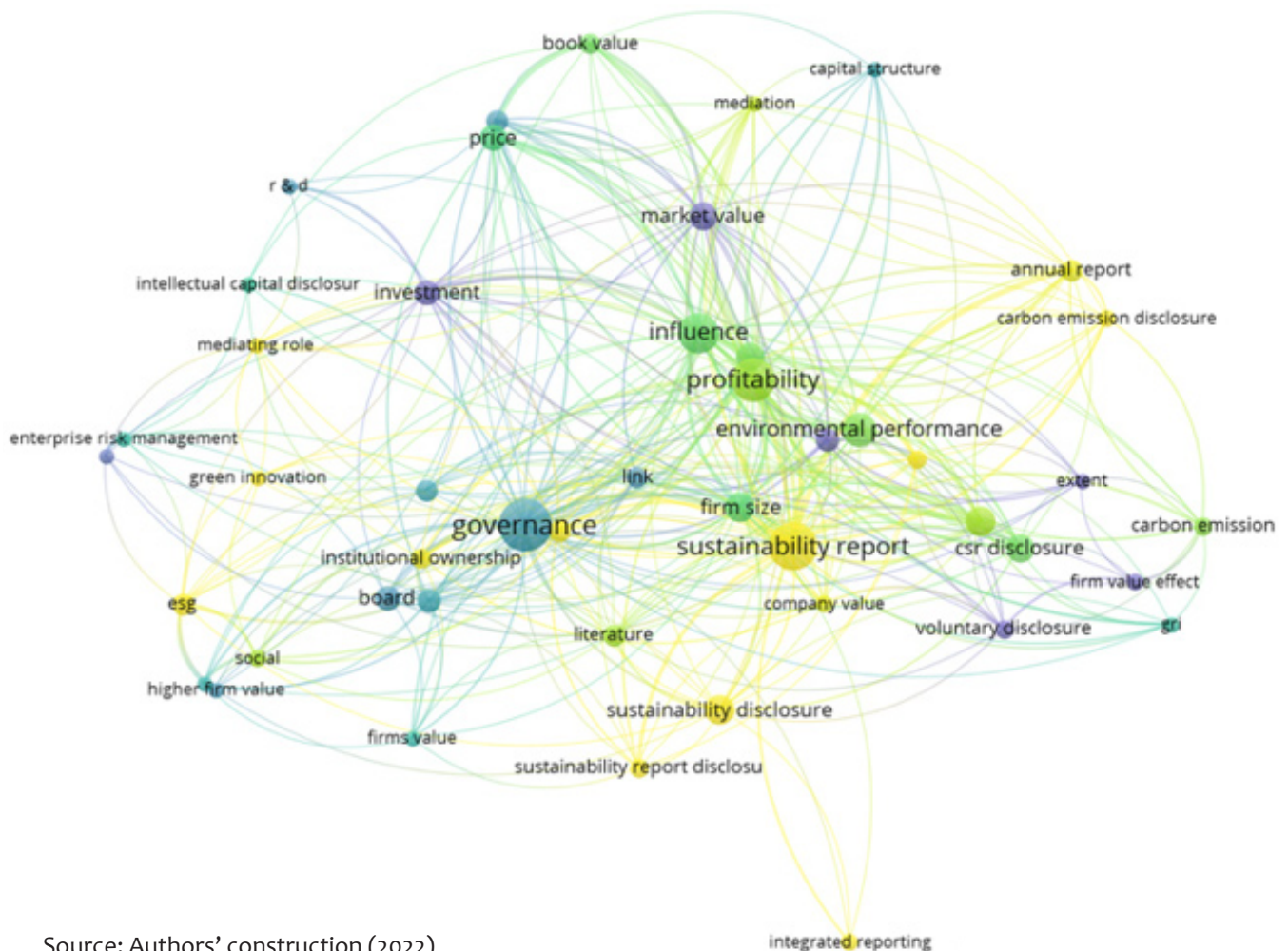
Cluster and Item	Link	Total Link Strength	Occurrence
Cluster 1			
Sustainability Report	36	131	93
CSR Disclosure	20	44	33
Sustainability disclosure	19	29	35
Integrated reporting	4	6	12
Cluster 2			
Investment	21	36	27
ESG	15	26	20
Social	11	23	12
Environmental	9	19	11
Cluster 3			
Governance	36	104	112
Board	17	25	27
Institutional Ownership	15	28	18
Firms Value	10	12	10
Cluster 4			
Carbon emission disclosure	12	24	12
Environmental performance	24	45	49
Voluntary disclosure	11	17	15
Cluster 5			
Market Value	18	40	34
Stock Price	16	31	19
Book Value	14	32	17
Cluster 6			
Good Corporate Governance	21	51	32
Capital structure	6	17	11

Source: Authors' construction (2022)

Cluster 1 highlights the keywords “Sustainability Report”, “CSR Disclosure”, “Sustainability Disclosure”, and “Integrated Reporting”. Cluster 1 groups keywords consisting of non-financial disclosures such as sustainability, CSR, and integrated reports. Table 2 shows the keywords mapped to cluster 2 are “investment”, “ESG”, “social”,

and “environmental”. This visualization shows keywords related to sustainability. The keywords highlighted by Cluster 2 are almost identical to the keywords in Cluster 4, consisting of “carbon emission disclosure”, “environmental performance”, and “voluntary disclosure”. This is interesting because sustainability is often associated with improving environmental performance. Cluster 3 has the keywords “government”, “board”, “institutional ownership”, and “firm value”. Meanwhile, Cluster 6 has the keywords “good corporate governance” and “capital structure”. The two clusters show a close relationship between firm values and good governance. Cluster 5 has the keywords “book value”, “market value” and “stock price” where these keywords are related to firm value assessment.

Figure 6 shows the latest topics that have arisen in relation to sustainability disclosure and firm value. Topic items that are brightly colored (yellow) are the newest topics, while items that are darker in color (purple or blue) indicate topics that have been developing for a long time. Topics regarding non-financial disclosures, be it sustainability, reporting, sustainability disclosures, or carbon emission disclosures, appear in bright areas, indicating that these topics are future research opportunities.



Source: Authors' construction (2022)

Figure 6 Keyword network cluster

The relationship between sustainability disclosure and firm value has been explored from various theoretical perspectives. Legitimacy Theory suggests that organizations engage in sustainability disclosure to maintain their social legitimacy and align their activities with societal expectations. By disclosing sustainability information, firms aim to demonstrate their commitment to responsible business practices, which can enhance their reputation and stakeholder support. This theory posits that sustainability disclosure positively affects firm value by establishing and maintaining legitimacy in the eyes of stakeholders. Stakeholder Theory emphasizes the importance of considering the interests and needs of different stakeholder groups in organizational decision-making. According to this theory, sustainability disclosure is driven by the need to meet stakeholder demands for transparency and accountability. When firms actively engage with stakeholders through disclosure, it can lead to improved stakeholder relationships, enhanced trust, and positive stakeholder perceptions, ultimately contributing to firm value. Agency Theory focuses on the relationship between principals (shareholders) and agents (management). It suggests that sustainability disclosure can serve as a mechanism to align the interests of shareholders and managers. By disclosing sustainability information, firms can provide shareholders with insights into how management is addressing environmental, social, and governance risks and opportunities. This disclosure can reduce information asymmetry, mitigate agency conflicts, and enhance firm value. Signaling Theory posits that sustainability disclosure can act as a signal to external stakeholders, particularly investors. Firms that voluntarily disclose sustainability information are perceived as more transparent and credible, signaling their commitment to long-term value creation and risk management. This increased transparency can attract socially responsible investors and positively influence investor perceptions, leading to higher firm value. Information asymmetry theory suggests that sustainability disclosure helps reduce information asymmetry between companies and stakeholders. By providing comprehensive and reliable sustainability information, firms can bridge the information gap and enable stakeholders to make more informed decisions. Reduced information asymmetry can increase stakeholder confidence, reduce uncertainty, and positively impact firm value.

These theories provide different perspectives on the motivations, mechanisms, and outcomes associated with sustainability disclosure and its relationship with firm value. Researchers often draw upon these theories to develop hypotheses, design empirical studies, and interpret findings. However, it is important to note that the relationship between sustainability disclosure and firm value is complex and can be influenced by multiple factors beyond these five theories. The five theories show that the relationship between sustainability disclosure and the firm is a broad issue that can be approached from a variety of angles. Future research could investigate the relationship between sustainability disclosure and firm valuation in greater depth to support the five theories or from different theoretical perspectives, such as Institutional Theory, Efficient Market Theory, Resource-Based Value Theory, Value-Enhancing Theory, and Voluntary Disclosure Theory. By exploring these and other theoretical perspectives, future research can provide a more comprehensive understanding of the relationship between sustainability disclosure and firm valuation. This can help bridge gaps in current knowledge, provide insights into the underlying mechanisms, and offer guidance to practitioners and policymakers in leveraging sustainability disclosure as a value-creating tool.

The relationship between sustainability disclosure and firm value is an important area of research that continues to evolve. In prior empirical investigations, the relationship between sustainability disclosure and firm value has not yielded a consistent outcome. Future studies can investigate the causal relationship between sustainability disclosure and firm value. Existing studies have mainly focused on the correlation between the two variables. Future research can employ innovative research designs, such as natural experiments or instrumental variable approaches, to establish causality and provide stronger evidence of the impact of sustainability

disclosure on firm values. Future studies may explore the underlying mechanisms through which sustainability disclosure affects firm value. Identify potential mediators, such as corporate reputation, customer loyalty, employee engagement, and investor perceptions, that transmit the effects of sustainability disclosure on firm value. Understanding these mechanisms can provide insights into the channels through which sustainability practices translate into financial outcomes. Future studies may investigate the moderating factors that influence the relationship between sustainability disclosure and firm value. Factors such as industry characteristics, firm size, ownership structure, and country-level governance frameworks may moderate the relationship. Exploring these factors can help identify the boundary conditions under which sustainability disclosure has a stronger or weaker impact on firm value.

Empirical research is frequently conducted in the context of the nation, with few studies focusing on a specific industrial sector, as was previously stated. Empirical research in specific industrial contexts will provide a more detailed picture of the effectiveness of sustainability disclosure to influence firm value in specific industries. The consequences of sustainability disclosure on firm value are of practical relevance to management, investors, and regulators around the world, given the increasingly harsh global competition. As a result, further study into the relationship between sustainability disclosure and firm value in the industrial setting will become more important. Future studies may find it fascinating to examine this topic in more depth. In a global environment, there haven't been many studies on the relationship between sustainability disclosure and corporate value. Future studies can conduct comparative studies that examine the relationship between sustainability disclosure and corporate value across multiple countries. This can help identify variations in the relationship due to differences in regulatory environments, cultural factors, and stakeholder expectations. Comparative studies can provide insights into the contextual factors that influence the relationship and help identify best practices in sustainability disclosure. Future studies may also investigate how investors from different regions and with different investment strategies perceive and respond to sustainability disclosure. Understanding investor preferences, decision-making processes, and the valuation of sustainability information across global markets can enhance our understanding of the relationship between sustainability disclosure and firm value.

The results of the bibliometric analysis of the relationship between sustainability disclosure and firm value support the view that sustainability disclosure is a topic that has recently been extensively researched. This shows the community's interest in this topic. The results of the analysis also show that topics regarding sustainability are often related to topics regarding environmental performance, including disclosures regarding carbon emissions by companies. An in-depth emphasis on environmental issues can provide a new perspective regarding the relationship between sustainability disclosure and firm value. Our next suggestion is that future studies examine the role that investor diversity plays in the connection between sustainability disclosure and firm value. Different types of investors, such as institutional investors, socially responsible investors, and retail investors, may have varying preferences and reactions to sustainability disclosures. Research can explore how these different investor groups incorporate sustainability information into their investment decisions and the subsequent impact on firm value. Future research may also investigate the influence of contextual factors, such as regulatory frameworks, cultural norms, and stakeholder pressures, on the relationship between sustainability disclosure and firm values. Different countries and regions have varying levels of sustainability disclosure requirements and societal expectations. Exploring how these contextual factors shape the relationship can provide a deeper understanding of the dynamics involved. By focusing on these future research directions, scholars can contribute to the understanding of the complex relationship between sustainability disclosure and firm value and provide valuable insights to both researchers and practitioners in the field of sustainable finance.

CONCLUSION

The relationship between sustainability disclosure and firm value is presented in this study in a systematic manner. To answer research issues, this study examined 114 linked papers before focusing on 43 empirical studies. This systematic review provides several contributions to explain the relationship between sustainability disclosure and firm value. To begin, this examination identifies the five most prevalent theories in the literature. Second, this analysis discovers that the literature on the relationship between sustainability disclosure and firm value has yet to reach a consensus. Third, current literature looks at the interaction between the two in the context of the country. Fourth, this research identified some of the gaps in the literature and proposed future research possibilities. Several studies have suggested that sustainability disclosure is an essential component in boosting firm value, despite the fact that the conclusions in the available research are still conflicting. Fifth, the trend regarding environmental concern by companies means that the emphasis on environmental issues in sustainability disclosure can be an interesting thing to study in the future. This research has several limitations. This literature study does not specify a time frame for determining the literature utilized to track changes in the topic's debate. Nonetheless, the decisions of the period must be examined in the subsequent literature evaluation, taking into account changes in public opinion, investor sentiment, and company sentiment over time. In addition, several metrics in the existing literature are used to measure the definition of sustainability disclosure and firm value. Because this study does not focus on a single indicator in order to achieve a larger sample size, the conclusions drawn may be influenced.

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